What is claimed is:

1. A recombinant replication competent retrovirus comprising:

a retroviral GAG protein;

a retroviral POL protein;

a retroviral ENV protein;

a retroviral genome comprising Long-Terminal Repeat (LTR) sequences at the 5' and 3' end of the retroviral genome, wherein a target specific polynucleotide sequence is contained within the LTR sequences at the 5' and/or 3' end of the retroviral genome,

a heterologous nucleic acid sequence operably linked to a regulatory nucleic acid sequence; and

cis-acting nucleic acid sequences necessary for reverse transcription, packaging and integration in a target cell.

2. The retrovirus of claim 1, wherein the retroviral genome is derived from a lentivirus.

3. The retrovirus of claim 2, wherein the lentivirus is human immunodeficiency virus (HIV).

4. The retrovirus of claim 1, wherein the retroviral genome is derived from the group consisting of murine

leukemia virus (MLV), Moloney murine leukemia virus (MoMLV), Gibbon ape leukemia virus (GALV) and Human Foamy Virus (HFV).

5. The retrovirus of claim 4, wherein the MLV is an amphotropic MLV.

6. The retrovirus of claim 1, wherein the ENV protein comprises an ENV sequence present in the group consisting of murine leukemia virus (MLV) and Vesicular stomatitis virus (VSV) ENV.

7. The retrovirus of claim 1, wherein the ENV protein further comprises a target-specific ligand sequence.

8. The retrovirus of claim 7, wherein the targeting specific ligand sequence is an antibody, receptor, or ligand.

9. The retrovirus of claim 6, wherein the ENV sequence is an amphotropic protein.

10. The retrovirus of claim 6, wherein the ENV sequence is a ecotropic protein.

11. The retrovirus of claim 1, wherein the target cell is a cell having a cell proliferative disorder.

12. The retrovirus of claim 1, wherein the target cell is a neoplastic cell.

13. The retrovirus of claim 11, wherein the cell proliferative disorder is selected from the group consisting of lung cancer, colon-rectum cancer, breast cancer, prostate cancer, urinary tract cancer, uterine cancer lymphoma, oral cancer, pancreatic cancer, leukemia, melanoma, stomach cancer and ovarian cancer.

14. The retrovirus of claim 1, wherein the target specific polynucleotide sequence is a tissue-specific promoter sequence.

15. The retrovirus of claim 14, wherein the promoter sequence is associated with a growth regulatory gene.

16. The retrovirus of claim 1, wherein the heterologous polynucleotide sequence is a suicide gene.

17. The retrovirus of claim 15, wherein the suicide gene is a thymidine kinase.

18. The retrovirus of claim 1, wherein the heterologous sequence is a marker gene.

19. The retrovirus of claim 1, wherein the regulatory nucleic acid sequence operably associated with the heterologous nucleic acid sequence is selected from the group consisting of a promoter, an enhancer, and an internal ribosome entry site.

20. A recombinant retroviral polynucleotide, comprising:

a polynucleotide sequence encoding a GAG protein;

a polynucleotide sequence encoding a POL protein;

a polynucleotide sequence encoding an ENV protein;

a polynucleotide sequence comprising a Long Terminal Repeat (LTR) at the 5' and 3' end of the retroviral polynucleotide sequence containing a target specific polynucleotide sequence;

a heterologous polynucleotides sequence operably linked to a regulatory nucleic acid sequence; and

cis acting polynucleotide sequence necessary for reverse transcription, packaging and integration in a target cell.

21. The polynucleotide of claim 20, wherein the GAG, POL and ENV sequences are derived from a lentivirus.

22. The polynucleotide of claim 21, wherein the lentivirus is human immunodeficiency virus (HIV).

23. The polynucleotide of claim 20, wherein the GAG, POL and ENV polynucleotide sequences are derived from murine leukemia virus (MLV) or Moloney murine leukemia virus (MoMLV).

24. The polynucleotide of claim 23, wherein the MoMLV is an amphotropic MoMLV.

25. The polynucleotide of claim 20, wherein the ENV sequence is derived from the group consisting of murine leukemia virus (MoMLV) and Vesicular stomatitis virus (VSV) ENV.

26. The polynucleotide of claim 20, wherein the ENV sequence further comprises a target-specific ligand polynucleotide sequence.

27. The polynucleotide of claim 26, wherein the targeting specific ligand sequence encodes an antibody, receptor, or ligand.

28. The polynucleotide of claim 25, wherein the ENV sequence is an amphotropic protein.

29. The polynucleotide of claim 25, wherein the ENV sequence is an ecotropic protein.

30. The polynucleotide of claim 20, wherein the target cell has a cell proliferative disorder.

31. The polynucleotide of claim 20, wherein the target cell is a neoplastic cell.

32. The polynucleotide of claim 30, wherein the cell proliferative disorder is selected from the group consisting of lung cancer, colon-rectum cancer, breast cancer, prostate cancer, urinary tract cancer, uterine cancer lymphoma, oral cancer, pancreatic cancer, leukemia, melanoma, stomach cancer, thyroid cancer, liver cancer, and brain cancer and ovarian cancer.

33. The polynucleotide of claim 20, wherein the target specific polynucleotide sequence is a cell- or tissue-specific promoter sequence.

34. The polynucleotide of claim 33, wherein the promoter sequence is associated with a growth regulatory gene.

35. The polynucleotide of claim 20, wherein the heterologous polynucleotide sequence is a suicide gene.

36. The polynucleotide of claim 35, wherein the suicide gene is a thymidine kinase or a purine nucleoside phosphorylase (PNP).

37. The polynucleotide of claim 20, wherein the heterologous sequence is a marker gene.

38. The polynucleotide of claim 20, wherein the regulatory nucleic acid sequence operably associated with the heterologous nucleic acid sequence is selected from the group consisting of a promoter, an enhancer, and an internal ribosome entry site.

39. The polynucleotide of claim 20, wherein the polynucleotide sequence is contained in a viral particle.

40. The polynucleotide of claim 20, wherein the polynucleotide sequence is contained in a pharmaceutically acceptable carrier.

41. A method of treating a subject having a cell proliferative disorder, comprising:

contacting the subject with a retrovirus, comprising,

a retroviral GAG protein;

a retroviral POL protein;

a retroviral ENV protein;

a retroviral genome comprising Long-Terminal Repeat (LTR) sequences at the 5' and 3' end of the retroviral genome, wherein a target specific polynucleotide sequence is contained within the LTR sequences at the 5' and 3' end of the retroviral genome,

a heterologous nucleic acid sequence operably linked to a regulatory nucleic acid sequence; and

cis-acting nucleic acid sequences necessary for reverse transcription, packaging and integration in a target cell.

42. The method of claim 41, wherein the subject is a mammal.

43. The method of claim 42, wherein the mammal is a human.

44. The method of claim 41, wherein the contacting is by *in vivo* administration of the retrovirus.

45. The method of claim 44, wherein the *in vivo* administration is by systemic, local, or topical administration.

46. The method of claim 41, wherein the contacting is by *ex vivo* administration of the retrovirus.

47. The method of claim 41, wherein the retroviral genome is derived from a lentivirus.

48. The method of claim 47, wherein the lentivirus is human immunodeficiency virus (HIV).

49. The method of claim 41, wherein the retroviral genome is derived from murine leukemia virus (MLV) or Moloney murine leukemia virus (MoMLV).

50. The method of claim 49, wherein the MoMLV is an amphotropic MoMLV.

51. The method of claim 41, wherein the ENV protein contains an ENV sequence selected from the group consisting of Moloney leukemia virus (MoMLV) and Vesicular stomatitis virus (VSV) ENV.

52. The method of claim 41, wherein the ENV protein further comprises a target-specific ligand sequence.

53. The method of claim 52, wherein the targeting specific ligand sequence is an antibody, receptor, or ligand.

54. The method of claim 41, wherein the target cell is a cell having a cell proliferative disorder.

55. The method of claim 41, wherein the target cell is a neoplastic cell.

56. The method of claim 54, wherein the cell proliferative disorder is selected from the group consisting of lung cancer, colon-rectum cancer, breast cancer, prostate cancer, urinary tract cancer, uterine cancer lymphoma, oral cancer, pancreatic cancer, leukemia, melanoma, stomach cancer and ovarian cancer.

57. The method of claim 1, wherein the target specific polynucleotide sequence is a tissue-specific promoter sequence.

58. The method of claim 41, wherein the promoter sequence is associated with a growth regulatory gene.

59. The method of claim 41, wherein the promoter sequence is associated with probasin.

60. The retrovirus of claim 41, wherein the heterologous polynucleotide sequence is a suicide gene.

61. The retrovirus of claim 41, wherein the suicide gene is a thymidine kinase.

62. A recombinant replication competent murine leukemia virus (MLV), comprising:

an MLV GAG protein;

an MLV POL protein;

an MLV ENV protein;

an MLV genome comprising Long-Terminal Repeat (LTR) sequences at the 5' and 3' end of the retroviral genome,

a heterologous nucleic acid sequence operably linked to a regulatory nucleic acid sequence; and

cis-acting nucleic acid sequences necessary for reverse transcription, packaging and integration in a target cell.